## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re patent application of:                       | )   |
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| Ahrens et al.                                      | )   |
| MAR 6 7 2005 EMMMB Docket No. 1890-0037            | ) Examiner: To be assigned  |
| Application No. 10/755,844                         | ) Group Art Unit: 2812  |
| Filed: January 12, 2004                            | )   |
| For: Method for Fabrication of a Contact Structure | )<br>)  |
|  | I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 3, 2005 |

Signature
March 3, 2005

(Date of deposit)

James D. Wood

Name of person mailing Document or fee

Date of Signature

## **INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sii.

Pursuant to 37 CFR §1.56, Applicants hereby disclose the following reference regarding the above-identified patent application. A copy of the foreign documents are enclosed.

## **Patent References**

| U.S. Patent No.                               | <u>Inventor</u>                       | <u>Issue Date</u>              |
|---|---------------------------------------|--------------------------------|
| 6,348,731 B1                                  | Ashley et al.                         | Feb. 19, 2002                  |
| 5,618,752                                     | Gaul                                  | Apr. 8, 1997                   |
| 5,608,264                                     | Gaul                                  | Mar. 4, 1997                   |
|   |                                       |                                |
|   |                                       |                                |
| U.S. Patent Application                       | <u>Inventor</u>                       | Publication Date               |
| U.S. Patent Application<br>US 2001/0054769 A1 | <u>Inventor</u><br>Raaijmakers et al. | Publication Date Dec. 27, 2001 |
|   |                                       |                                |

Commissioner for Patents March 3, 2005 Page 2 of 3

| Foreign References | Publication Date | Country Code |
|--------------------|------------------|--------------|
| WO 03/079431 A     | Sept. 25, 2003   | WO           |
| EP 1 391 924 A1    | Feb. 25, 2004    | EP           |
| FR 2 816 758       | May 17, 2002     | FR           |
| JP 2002/190477     | July 5, 2002     | JР           |
| EP 1 094 504 A2    | April 25, 2001   | EP           |
| DE 19816245        | Oct. 21, 1999    | DE           |

## **Articles**

1) Burkett et al., "Processing Techniques for 3-D Integration Techniques", Superficies y Vacio 13, 1-6, December 2001, 6 pages.

English translations of the Abstracts for FR 2 816 758 A1, JP 2002190477 and DE 19816245 are enclosed.

EP 1 391 924 A1 corresponds to WO 03/079431 A.

FR 2 816 758 A1 describes an electroplating method wherein interconnections of integrated circuits are formed. A damascene structure is formed on a surface of a substrate whereon a barrier diffusion layer is deposited comprising tungsten. On the barrier diffusion layer, additional layers comprising copper are formed. A layer comprising copper is formed by electroplating and the structure is filled by forming a copper layer.

JP 2002/190477 describes a method for manufacturing a semiconductor device wherein a via hole is formed in a semiconductor substrate. A metal layer is formed on a surface of the via hole and the via hole is filled by electroplating copper. The backside of the substrate is thinned in order to expose the copper material in the via hole. A metal layer for contacting is formed on the backside

Pursuant to 37 C.F.R. § 1.97(b), this Information Disclosure Statement is being filed within three months after the filing date of the application or before the mailing of the first office action on the merits.

It is believed that no fees are due for the consideration of this Information Disclosure Statement. However, the Commissioner is hereby authorized to charge any deficiency or to credit any overpayment to Deposit Account No. 13-0014, but not to include any payment of issue fees.

March 3, 2005 Maginot, Moore & Beck Bank One Center Tower 111 Monument Circle, Suite 3000 Indianapolis, Indiana 46204-5115 (317) 638-2922 Respectfully Submitted,

James D. Wood Attorney for Applicants Registration No. 43,285

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|--|-------------------------------|-----------------------------|--|--|
| FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT | MMB DOCKET NO. 1890-0037      | APPLICATION NO.: 10/755,844 |  |  |
| (C 8 63 E                                      | APPLICANT(S): Ahrens et al.   |                             |  |  |
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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE                | NAME                        | CLASS              | SUB-CLASS          | FILING DATE                                  |
|                     | AA   | 6,348,731 B1       | Feb. 19, 2002       | Ashley et al.               |                    |                    |  |
|                     | AB   | 5,618,752          | Apr. 8, 1997        | Gaul                        |                    |                    |  |
|                     | AC   | 5,608,264          | Mar. 4, 1997        | Gaul                        |                    |                    |  |
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|                     | AF   | 2003/0215984 A1    | Nov. 20, 2003       | Pogge et al.                |                    |                    |  |
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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE                | COUNTRY                     | CLASS              | SUB-CLASS          | TRANSLATION                                  |
|                     | AL   | WO 03/079431 A     | Sept. 25, 2003      | wo                          |                    |                    | Yes<br>No                                    |
|                     | AM   | EP 1391924 A1      | Feb. 25, 2004       | EP                          |                    |                    | Yes<br>No                                    |
|                     | AN   | FR 2816758         | May 17, 2002        | FR                          |                    |                    | Yes<br>No                                    |
|                     | AO   | JP 2002190477      | July 5, 2002        | JР                          |                    |                    | Yes<br>No                                    |
|                     | AP - | EP 1094504 A2      | Apr. 25, 2001       | EP                          |                    |                    | Yes<br>No                                    |
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|                     | AQ   | Burkett et al.     | , "Processing Techn | iques for 3-D Integration T | Techniques", Super | ficies y Vacio 13, | 1-6,   |
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| MMB DOCKET NO. 1890-0037    | APPLICATION NO.: 10/755,844 |
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| EXAMINER<br>INITIAL |            | DOCUMENT<br>NUMBER | DATE              | NAME   | CLASS            | SUB-CLASS     | FILING DATE |
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|                     | AK         |                    |                   |  |                  |               |             |
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| EXAMINER<br>INITIAL |            | DOCUMENT<br>NUMBER | DATE              | COUNTRY  | CLASS            | SUB-CLASS     | TRANSLATION |
|                     | AL         | DE 19816245        | Oct. 21, 1999     | DE   |                  |               | Yes<br>No   |
|                     | AM         |                    |                   |  |                  |               | Yes<br>No   |
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|                     | AO         |                    |                   |  |                  |               | Yes<br>No   |
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